

WHAT IS CLAIMED IS:

1. An apparatus of attaching a polarizing plate to a liquid crystal display cell,
comprising:

a base body:

5 a first cutting out module that is disposed on the base body and cuts out a first polarizing
plate from a first mother polarizing plate;

a first protection sheet strip module that is disposed on the base body and strips off a first
protection sheet from the first polarizing plate to produce a first stripped polarizing plate; and

a first polarizing plate attaching module that is disposed on the base body and attaches
10 the first stripped polarizing plate to a first face of the liquid crystal display unit cell of an
assembled substrate.

2. The apparatus of claim 1, further comprising a first turning over module disposed
between the first protection sheet strip module and the first polarizing plate attaching module, the
15 first turning over module being disposed on the base body, the first stripped polarizing plate
being turned upside down by the first turning over module.

3. The apparatus of claim 1, further comprising a first polarizing plate loader that
supplies the first cutting out module with the first mother polarizing plate, the first polarizing
20 plate loader being disposed on the base body.

4. The apparatus of claim 1, further comprising an assembled substrate loader that supplies the first polarizing plate module with the assembled substrate, the assembled substrate loader being disposed on the base body.

5. The apparatus of claim 1, further comprising an assembled substrate unloading module that unloads the assembled substrate having the first polarizing plate attached thereon.

6. The apparatus of claim 1, wherein the first cutting out module includes a first x-axis blade module that cuts out the first polarizing plate in a first direction, and a first y-axis blade module that cuts out the first polarizing plate in a second direction substantially perpendicular to the first direction.

7. The apparatus of claim 6, wherein the first x-axis blade module includes a first x-axis blade and a first x-axis blade driving unit that drives the first x-axis blade by pushing and pulling the first x-axis blade, the first y-axis blade module includes a first y-axis blade and a first y-axis blade driving unit that drives the first y-axis blade by pushing and pulling the first y-axis blade.

8. The apparatus of claim 7, wherein a first length of the first x-axis blade is substantially equal to a length of an edge of the first polarizing plate in the first direction, and a second length of the first y-axis blade is substantially equal to an edge of the first polarizing plate in the second direction.

9. The apparatus of claim 7, wherein a first ratio of a first length of the first x-axis blade to a length of an edge of the first polarizing plate in the first direction is in a range from about 0.5 to about 1, and a second ratio of a second length of the first x-axis blade to a length of an edge of the first polarizing plate in the second direction is in a range from about 0.5 to about 1.

10. The apparatus of claim 1, wherein the first protection sheet strip module includes a first picker that picks up the first protection sheet by vacuum absorption, and a first picker driving module that drives the picker by pushing and pulling the picker toward the first protection sheet.

11. The apparatus of claim 1, wherein the first polarizing plate attaching module includes a first assembled substrate supporting unit that supports the assembled substrate, and a first polarizing plate attaching unit that attaches the first stripped polarizing plate to the first face of a liquid crystal display unit cell.

12. The apparatus of claim 11, wherein the first assembled substrate supporting unit includes a first assembled substrate supporting plate having a plurality of holes, and a first assembled substrate absorbing part that vacuum absorbs the assembled substrate disposed on the first assembled substrate supporting plate.

13. The apparatus of claim 12, wherein the first assembled substrate absorbing part includes a first vacuum pipe and a first vacuum generating member connected with the first vacuum pipe.

5 14. The apparatus of claim 11, wherein the first polarizing plate attaching unit includes a first pushing plate that pushes the first polarizing plate toward the liquid crystal display unit cell, and a first pushing plate driving module that drives the first pushing plate.

10 15. The apparatus of claim 1, wherein the assembled substrate includes a plurality of the liquid crystal display unit cell arranged in a matrix shape, the first cutting out module cuts out the first polarizing plate by a column or by a row.

16. The apparatus of claim 1 further comprising:
a second cutting out module that is disposed on the base body and cuts out a second
15 polarizing plate from a second mother polarizing plate;

a second protection sheet strip module that is disposed on the base body and strips off a second protection sheet from the second polarizing plate to produce a second stripped polarizing plate; and

a second polarizing plate attaching module that is disposed on the base body and attaches
20 the second stripped polarizing plate to a second face of a liquid crystal display unit cell of an assembled substrate.

17. The apparatus of claim 16, further comprising a second turning over module disposed between the second protection sheet strip module and the second polarizing plate attaching module, the second turning over module being disposed on the base body, the second stripped polarizing plate being turned upside down by the second turning over module.

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18. The apparatus of claim 16, further comprising a second polarizing plate loader that supplies the second cutting out module with the second mother polarizing plate, the second polarizing plate loader being disposed on the base body.

10 19. The apparatus of claim 16, further comprising an assembled substrate loader that supplies the second polarizing plate module with the assembled substrate, the assembled substrate loader being disposed on the base body.

15 20. The apparatus of claim 16, further comprising an assembled substrate unloading module that unloads the assembled substrate having the second polarizing plate attached thereon.

21. The apparatus of claim 16, wherein the second cutting out module includes a second x-axis blade module that cuts out the second polarizing plate in a first direction, and a second y-axis blade module cuts out the second polarizing plate in a second direction
20 substantially perpendicular to the first direction.

22. The apparatus of claim 21, wherein the second x-axis blade module includes a second x-axis blade and a second x-axis blade driving unit that drives the second x-axis blade by

pushing and pulling the second x-axis blade, the second y-axis blade module includes a second y-axis blade and a second y-axis blade driving unit that drives the second y-axis blade by pushing and pulling the second y-axis blade.

5 23. The apparatus of claim 22, wherein a first length of the second x-axis blade is substantially equal to a length of an edge of the first polarizing plate in the first direction, and a second length of the second y-axis blade is substantially equal to an edge of the first polarizing plate in the second direction.

10 24. The apparatus of claim 22, wherein a first ratio of a first length of the second x-axis blade to a length of an edge of the second polarizing plate in the first direction is in a range from about 0.5 to about 1, and a second ratio of a second length of the first x-axis blade to a length of an edge of the first polarizing plate in the second direction is in a range from about 0.5 to about 1.

15 25. The apparatus of claim 16, wherein the second protection sheet strip module includes a second picker that picks up the second protection sheet by vacuum absorption, and a second picker driving module that drives the picker by pushing and pulling the picker toward the second protection sheet.

20 26. The apparatus of claim 16, wherein the second polarizing plate attaching module includes a second assembled substrate supporting unit that supports the assembled substrate, and

a second polarizing plate attaching unit that attaches the second stripped polarizing plate to the second face of a liquid crystal display unit cell.

27. The apparatus of claim 26, wherein the second assembled substrate supporting
5 unit includes a second assembled substrate supporting plate having a plurality of holes, and a second assembled substrate absorbing part that vacuum absorbs the assembled substrate being disposed on the second assembled substrate supporting plate.

28. The apparatus of claim 27, wherein the second assembled substrate absorbing part
10 includes a second vacuum pipe and a second vacuum generating member connected with the second vacuum pipe.

29. The apparatus of claim 26, wherein the second polarizing plate attaching unit
includes a second pushing plate that pushes the second polarizing plate toward the liquid crystal
15 display unit cell, and a second pushing plate driving module that drives the second pushing plate.